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EA-01-05
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DECISION RECORD

for

Travis Tyrrell Seed Orchard Insect Control

Environmental Assessment No. EA-01-05

United States Department of the Interior
Bureau of Land Management
Oregon State Office
Eugene District

BACKGROUND

The Tyrrell Seed Orchard is a centralized tree seed orchard designed to provide genetically improved Douglas-fir seed for BLM's Coos Bay, Roseburg and Eugene districts and for ten private timber and seed companies. Protecting cone crops from insect damage in necessary in order to meet the seed need for the BLM and private cooperators. The purpose of the action is to control cone insects which cause damage and seed loss to orchard cone crops. There is a need for control of cone insects in five seed production units (42 acres) in the spring of 2001. The seed extraction from last year's cone crop has been completed and the results show that there was substantial damage to the seed from the Douglas-fir cone gall midge (*Contarinia oregonensis*), the Douglas-fir seed chalcid (*Megastigmas spermotrophus*), and Douglas-fir coneworm (*Dioryctria abietivorella*). This indicates that the insect populations are increasing. The seed chalcid caused more damage than anticipated.

An Environmental Impact Statement (EIS) covering an Integrated Pest Management Program for the orchard is in progress, but is not expected to be completed until Fall 2002. This Environmental Assessment (EA) is being prepared for the 2001 spring insect control project.
Copies of this decision are posted on the Eugene internet WEB site at:
http://www.edo.or.blm.gov/nepa

DECISION

Based on the analysis contained in the EA, I have decided to implement the spring insect spray proposal with alternative A (Application of Dimethoate Insecticide through use of Ground-based Equipment), herein known as the "selected action".

The following mitigation/conservation measures will be applied to prevent undesirable impacts to the adjacent environment, nearby neighbors, private property, and orchard workers. Some of these measures were determined while consulting with the National Marine Fisheries Service (NMFS).

- Insecticide application will occur in the early morning or late evening when wind, temperature and humidity are optimum for minimizing drift. Spraying will be limited to periods when wind speeds are less than 6 mph, temperature is less than 70^{N}F, and relative humidity is greater than 50 percent. Application will not occur during periods of wind turbulence, when precipitation or fog is occurring or

is imminent, during inversions, or when foliage is carrying snow or ice. Environmentally sensitive unit margins will be sprayed preferentially at first light when winds are typically calm

- When spraying trees within two tree rows from the edge of treatment unit perimeters, spraying will be done by directing the nozzle towards the center of the treatment unit, minimizing the chance for drift outside the designated treatment areas. All trees within the treatment area are at least 35 feet from orchard fence lines and neighboring properties.

- Precautions will be taken to assure that equipment used for transport, mixing, and application will not leak pesticides into water or soil. Staging areas used for mixing pesticides and cleaning equipment will be located at least 200 feet from streams with water where accidental spillage will not run into or contaminate any riparian area, perennial or intermittent waterway, unprotected ephemeral waterway, or wetland. A spill kit filled with absorbent materials will be located near the mixing area in the unlikely event of an emergency. An emergency safety plan will be developed which will include a contingency for spills, necessary emergency actions, and first aid procedures.

- Applications will be timed so as not to coincide with or closely precede large storm events that could result in substantial runoff. If the long term forecast (1-3 day) predicted a storm with heavy precipitation, spraying will not be done. In addition, spraying will be timed to precede at least 24 hours of dry weather, which will be an adequate amount of time for the spray application to dry.

- If possible, mowing will take place 2-3 days prior to spraying to remove any floral component that may attract pollinators, such as bees, into the treatment area. Weather conditions, stage of vegetative growth, and operational limitations could affect the timing of this mitigation measure.

- To minimize impacts to non-target insects, such as pollinators, spray operations will be done, if possible, during periods when temperatures are less than 56" F, when temperatures are cooler and insects are less active.

- All applicable local, state and Federal laws, including the pesticide labeling instruction of the Environmental Protection Agency, will be strictly followed.

- A 200 foot buffer will be maintained on treatment boundaries next to perennial and intermittent streams (see table below).

- Spray detection cards will be placed outside sensitive treatment unit boundaries (see table below). These cards will be spaced 100 feet apart and will be stapled at a 45" angle to the top of fence posts or wooden lathe, with the cards facing the treatment area. Cards placed on fence posts will be a minimum of 35 ft. from the spray area. Distance of spray cards from treatment boundaries will vary from 35-100 feet to help determine the distance that drift occurs. Spray cards will be checked concurrently with spray operations when spraying occurs within 100' of the spray cards. Application techniques will be altered if drift is detected. Spray operations will be halted if drift is observed 59 feet from the treatment area. Application will not proceed (following a drift work stoppage) until NMFS has been notified, and environmental conditions and/or application techniques have been sufficiently altered to prevent 60-foot drift. It is anticipated when operating within the interior of the treatment units and according to the spray guidelines (wind, temperature, and humidity) that the chances of drift occurring outside the treatment areas will be negligible.

- Silt fence catchment barriers will be installed across ephemeral drainages located close to or inside treatment units (see table below). The function of these barriers will be to catch sediment (and attached insecticide compounds) leaving the treatment area. Sand traps will placed

immediately above silt fence catchment barriers to enhance retention of transported organics and sediments, and to provide a sample medium for monitoring efforts.

- Soil aeration will be done along unit boundaries downslope from treatment units and above catchment barriers (see table below). This will create holes in the turf and will function to help reduce and help stop sediment and moisture runoff from the treatment unit areas.

- A job hazard analysis (JHA) will be developed to provide a detailed description of orchard jobs and associated risks involved with pesticide use and application. It will identify requirements for personal safety equipment, training, and certification to perform specific tasks.

- A pesticide safety plan has been developed and identifies project specific safety procedures. In the unlikely event of a spill, the "Accidental Chemical Release" procedures in the pesticide safety plan will be followed. A spill containment kit will be located at each of the mixing sites.

The following table gives details for each unit for some of the conservation/mitigation measures described above:

Mitigation Measures by Orchard Unit:

Orchard Unit	Boundary/Description	Buffers	Drift Cards	Catchment barriers/ Aeration
Swisshome/Mapleton	west-private	not needed, upslope	not needed	not needed
	north-fallow ground	not needed, upslope	not needed	not needed
	east-untreated portion of unit (20-30' tall trees) and thick vegetative cover	not needed, 200-600' from stream #8)	not needed	barrier on ephemeral channel #52, Aeration along entire boundary
	south-fenceline, road, timber	200' buffer on ephemeral stream #51 (if live water)	yes-along southwest portion near stream #51	barrier on stream #51 (put next to fence), Aeration above barrier and along entire boundary
Noti	west-thick vegetative cover	not needed, 300' from stream #8	yes	Aeration along entire boundary
	north-fallow ground	not needed, upslope	not needed	not needed
	east-private	not needed, upslope	not needed	not needed
	south-fenceline, road, young timber	>200' buffer from ephemeral /intermittent stream #54	yes	Aeration along entire boundary
Lorane	west-road and thick vegetative cover	not needed-300' from stream #8	not needed	barrier on channel at SW corner of unit, Aeration above barrier

Orchard Unit	Boundary/Description	Buffers	Drift Cards	Catchment barriers/ Aeration
	north-fallow ground	not needed, upslope	not needed	not needed
	east -untreated portion of unit (15-20' tall trees)	not needed, 400' from intermittent stream #54	not needed	not needed
	south-fallow ground	not needed	not needed	not needed
Wells Creek	west-private	not needed	not needed	not needed
	north-fallow ground	200' buffer from intermittent stream #9 in NE corner of unit	yes-along buffer of stream #9	Aeration along boundary next to buffer
	east- thick vegetative cover 100' to stream #8	200' buffer from perennial stream #8	yes	Aeration along entire boundary
	south-fallow ground	200' buffer from live water in stream #5	yes -east portion of unit boundary	barrier on ephemeral channels #5 & 7, Aeration along entire unit boundary
McKenzie Low	west-road, fenceline, timber	not needed, upslope	not needed	not needed
	north-fallow ground	not needed, upslope	not needed	not needed
	east-adjacent unit (10' tall trees)	not needed, no perennial or intermittent streams	not needed	barrier on ephemeral channel #19 and aeration above barrier and along entire boundary
	south-adjacent unit (small trees)	not needed, 200' from intermittent stream #12	yes	Aeration along entire boundary

- Water quality monitoring for detectible concentrations of insecticide will be conducted immediately before, and after the aerial spray. The results of this monitoring combined with the results from the spray cards should provide evidence of the immediate impacts from any potential drift. If any rainfall events occur after the spray project that result in surface runoff (during Spring), runoff and sediment sampling will be conducted with the intent of validating the modeling and impact assessment. This data, along with a proposed long-term monitoring program, will be included in the Integrated Pest Management EIS. In addition, runoff monitoring will continue for a minimum of six months following insecticide application.
- Adjacent landowners will be notified prior to pesticide application.

C Pesticide applicator licensing and training will be used as a quality control measure. Training and testing of applicators covers laws and safety, protection of the environment, pesticide

handling and disposal, pesticide formulations and application methods, calibration of devices, use of labels and data sheets, first aid, symptoms of pesticide exposure, and other activities.

C Material Safety Data Sheets will be posted at storage facilities and made available to workers. These provide physical and chemical data, fire and reactivity data, specific health hazard information, spill or leak procedures, instructions for worker hygiene, and special precautions.

- Appropriate protective clothing will be worn by all workers. At a minimum, the type and amount of protective clothing listed on the pesticide label will be used. For dimethoate this would include: Neoprene or rubber boots, neoprene or nitrile gloves, long-sleeved coveralls, aprons when mixing, hat and safety goggles or glasses with side shields and brow protection and an approved respirator for pesticides for the exposures encountered.

- Orchard workers who are regularly involved with application of organophosphate pesticides will be required to have periodic cholinesterase tests. Baseline testing will be completed and tests repeated each year when such pesticides are being used to determine if exposure is causing any detrimental effects to workers.

- Workers who know they are hypersensitive to pesticides will not be assigned to application projects. Workers who display symptoms of hypersensitivity to pesticides during application will be reassigned to other duties.

- Treated areas will not be entered until the spray has dried. Warning signs will be posted to discourage public entry into treated areas.

ALTERNATIVES CONSIDERED

The alternatives considered in detail included the proposed action (Application of Esfenvalerate Insecticide through use of Ground-Based Equipment), alternative A (Application of Dimethoate Insecticide through use of Ground-based Equipment) and alternative B (No Action). A complete description of the alternatives analyzed in detail are contained in the EA (pages 3-5).

REASONS FOR THE DECISION

Considering public comment, the content of the EA, and the management direction contained in the Resource Management Plan, I have decided to implement the selected action as described above. My rationale for this decision follows:

- The selected action provides the best means to address the need as stated in the EA (pages 1-2). The use of Dimethoate will allow for better control of the seed chalcid than Esfenvalerate and will also afford good control of the Douglas-fir gall midge. In addition, the treatment window (calendar time available to spray) is considerably longer for Dimethoate allowing greater flexibility in operations.

- The selected action is consistent with applicable land use plans, policies, and programs (EA pages 2-3).

PUBLIC INVOLVEMENT

A letter requesting comments on the scope of this analysis was sent to interested individuals and organizations in January 2000. No comments were received. The project was described in the Eugene District “Project Update,” distributed in December 2000 to over 1200 people and organizations on the

District mailing list.

Copies of the EA and draft FONSI were made available to the public for review and comment between January 10, 2001 and February 10, 2001. One comment was received. A response was sent directly to the commentor and is available for review in the project analysis file.

The interdisciplinary team did not identify any additional significant or major issues from public input that led to the development of an additional action alternative or revision of the EA.

CONSULTATION

Consultation has been completed with the NMFS. In a Biological Opinion prepared by the NMFS pursuant to section 7 of the Endangered Species Act, NMFS concluded that the selected action was not likely to jeopardize Oregon Coast coho salmon or destroy or adversely modify critical habitat. NMFS has provided specific conservation measures (included in mitigation/conservation measures) and other terms and conditions as follows:

- Review the Biological Opinion and the pesticide safety plan (including the spill response plan) with the contracted applicator prior to commencing insecticide application operations.
- Notify NMFS one week prior to commencing the initial insecticide application.
- Allow NMFS to be present, at its discretion, during any insecticide application operation.
- Following the completion of insecticide application and monitoring, provide NMFS with a summary report by December 31, 2001, describing the success of the conservation measures.
- Notify NMFS if a dead, sick or injured OC coho salmon is located.

In the consultation process, NMFS raised questions about sublethal effects on fish of chemical application that were not addressed in the EA. Sublethal effects are generally defined as physiological and reproductive effects that are not mortal. Sublethal effects were not identified as a concern during the scoping process for the EA. In cooperation with NMFS, 1) BLM searched the literature for sublethal documentation on salmonids with respect to Esfenvalerate and Dimethoate; 2) BLM performed a new risk assessment on sublethal exposure limits and probabilities which was reflected in the biological opinion; and 3) BLM developed a monitoring plan, which was reviewed by NMFS for inclusion into the biological opinion. This analysis concluded that there was a <5% probability of sublethal effects from the selected action.

In addressing the sublethal effects, BLM identified a slight error in the analysis of lethal effects that was presented in the EA. This error was corrected in the information provided to the NMFS and did not alter the conclusions in the EA about the impacts of the selected action. Additional information on the analysis of sublethal effects and the correction of this minor error are available in the project analysis file.

PROTEST PROVISIONS

This forest management decision may be protested under 43 CFR 5003 - Administrative Remedies. In accordance with 43 CFR 5003.2, the decision for this project will not be subject to protest until the notice of decision is published in the Eugene Register-Guard on April 12, 2001. This published notice of decision will constitute the decision document for the purpose of protests of this project. 43 CFR 5003.2(b). Protests of the decision must be filed with this office within 15 days after publication of the notice of decision.

IMPLEMENTATION DATE

If no protest is received by the close of business (4:15 P.M. Pacific Standard Time) on April 27, 2001, this decision will become final. If a timely protest is received, this decision will be reconsidered in light of the protest and other pertinent information available in accordance with 43 CFR 5003.3.

Approved by: Julia Dougan, District Manager on April 11, 2001.

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FINDING OF NO SIGNIFICANT IMPACT

for

Travis Tyrrell Seed Orchard Insect Control

Environmental Assessment No. EA-01-05

United States Department of the Interior
Bureau of Land Management
Oregon State Office
Eugene District

The Eugene District of the Bureau of Land Management (BLM) has analyzed a proposal for insect control at the Travis Tyrell Seed Orchard in an environmental assessment (EA OR090-01-05). The Tyrrell Seed Orchard is a centralized tree seed orchard designed to provide genetically improved Douglas-fir seed for BLM's Coos Bay, Roseburg and Eugene districts and for ten private timber and seed companies. Protecting cone crops from insect damage in necessary in order to meet the seed need for the BLM and private cooperators. The purpose of the action is to control cone insects which cause damage and seed loss to orchard cone crops. There is a need for control of cone insects in five seed production units (42 acres) in the spring of 2001. The EA considered a Proposed Action (application of Esfenvalerate insecticide through use of ground-based equipment), Alternative A (application of Dimethoate insecticide through use of ground-based equipment), and the no action alternative.

A summary of the environmental effects (as discussed in the EA) follows:

- Alternative A would have no significant impacts on social and economic environment in the region or the locality (EA, pp. 8-10).

- The EA analysis concludes that the application and mitigation measures would insure that the Alternative A would have a negligible effect on public health and safety (EA, pp. 10-11)

- There are no unique characteristics, such as prime or unique farmlands or wild and scenic rivers within the project area (EA, p. 8).

- Impacts on the quality of the human environment would not be highly controversial. A letter requesting comments on the scope of the analysis was sent on January 4, 2000. No comments were received (EA, p. 31). Comments were received from Jan Wroncy during the EA comment period. She had concerns about the insecticide alternatives. She felt that the insecticides considered could degrade the environment, be hazardous to humans, threaten runs of salmon and degrade the soil and tree health. She also had concerns about the safety of the active and inert ingredients in the insecticides, about the potential for drift from the project area, and about the predator-prey relationship. A response to these concerns has been sent to her and is available in the project analysis file.

C There are no highly uncertain, unique, or unknown risks involved.

C Alternative A would involve application only in 2001 and would not establish any precedent for future action (EA, p. 3-5).

C The EA analysis considered cumulative impacts and did not identify any that might be significant (EA, pp. 10-11, 13-14, 17-18, 21-22, 26-29, 30-31).

C There are no known cultural resources within the project area (EA, p. 8).

C In a biological opinion prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act, NMFS concluded that Alternative A is not likely to jeopardize Oregon Coast coho salmon or destroy or adversely modify critical habitat. The EA analysis concluded that Alternative A would have no effect on any other threatened or endangered species (EA, pp. 18-22, 25-27).

- Alternative A would not violate Federal, State, and local law requirements imposed for protection of the environment.

Determination:

On the basis of the information contained in the EA, and all other information available to me, it is my determination that implementation of Alternative A would not have significant environmental impacts not already addressed in the *Eugene District Proposed Resource Management Plan/Environmental Impact Statement* (November 1994), and the *Eugene District Record of Decision and Resource Management Plan* (June 1995), with which this EA is in conformance, and does not, in and of itself, constitute a major federal action having a significant effect on the human environment. Therefore, an EIS or a supplement to the existing EIS is not necessary and will not be prepared.

Approved by: _____ _____

Julia Dougan Date

Eugene District Manager